

ABSTRACT OF THE DISCLOSURE

A transmission unit which transports digital signals between different network systems, effectively  
5 converting the signals to resolve their differences in the specifications. A first signal interface transmits and receives first network signals. A second signal interface transmits and receives second network signals. A downward converter produces lower-level signals by converting  
10 received first and second network signals to a lower hierarchical level at which the first and second network systems are compatible with each other in terms of logical signal structure. An upward converter produces a higher-level signal by converting each given lower-level signal  
15 to an upper hierarchical level which complies with the first or second network system. A loopback unit provides loopback paths to route the lower-level signals from the downward converter to the upward converter, so that the first and second network signal will be converted in both  
20 directions.